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ABSTRACT

A review of the research indicates that the interface between the findings from research on teaching and staff development of teachers is an important but neglected one. An improvement in teaching skills calls for an interactive or collaborative mode of professional development which is based on classroom interests and the needs of teachers, with provision for expertise from outside. While the prime objective of clinical supervision is the improvement of instruction, its strength lies in the intensive conferencing that occurs between teacher and supervisor which provides nonevaluative feedback to the teacher. An Australian pilot study used principals trained in clinical supervision to introduce research findings into the repertoire of experienced elementary school teachers. Data were collected over one year of the two-phase operation: (1) familiarization with skills and processes; and (2) implementation using the clinical supervision framework. The research findings were presented as suggestions to the teachers, which appealed to the participants' sense of balance between needed authentication for classroom practices and the practicalities involved in actually implementing changes in the classroom. (FG)

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TWO FOR THE PRICE OF ONE: STAFF DEVELOPMENT THROUGH THE UTILISATION OF FINDINGS FROM RESEARCH ON TEACHING.

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INTRODUCTION

Whether fuelled by self-interest in the face of declining tertiary enrolments, or whether borne out of a belated but true sense of altruism to improve the daily lives of school practitioners, universities and colleges are currently displaying an unprecedented interest in staff development in schools. Despite the almost motherhood status of the concept, staff development (in-service education, professional growth, teacher renewal, or any other euphemism) remains a curious phenomenon. As William's (1978) has noted:

> .... it resembles the world's search for eternal peace. The citizens of the world seek the end of war and violence, yet somehow it always eludes their grasp. Similarly with staff development - everyone extolls its merits and sees the need for it. Many even agree on what characterizes an effective staff development program. Yet the lament from the vast majority of those who are subjected to staff development activities is that they are ineffective and generally a failure (p. 95).

Discussion in this paper commences by looking at a range of reasons why staff development in schools has been unsuccessful. The related question of why findings from research on teaching have had less than optimal impact on classroom practice, is also addressed. It is posited that the shortcomings of both stem largely from an inability of each to capitalize on the benefits of the other. Many staff development efforts have failed to generate improvements in teaching effectiveness because of a lack of attention to substantive practices shown by research to have an impact on teaching and learning. It will be suggested that findings from research on teaching have been limited in their impact because of parsimonious conceptualization in the implementation phase. The paper concludes with a consideration of a "clinical" approach that seeks to simultaneously incorporate both elements. Tentative findings are cited from a pilot study.

DEMISE OF STAFF DEVELOPMENT

The literature is replete with reasons why staff development has not worked in schools in the past. About the only real consensus that exists, is that what we currently have, is inefficient, ineffectual and wasteful (McLaughlin & March, 1978). Some ascribe the root cause to the past legacy of wanton neglect and disregard for this area. While McLaughlin and March (1978) describe staff development as "education's neglected step-child" (p. 69), and Howey (1976a) argues that "it has been treated for too long like a bastard child" (p. 102), Davies (1967) labelled staff development as "the slum of American education - disadvantaged, poverty-stricken, neglected, psychologically isolated". Where Houston and Freiberg (1979) likened past attempts at staff development for teachers to "perpetual motion machines" (p. 7) trying to get something for nothing, Wagstaff and McCullough (1973) were content to merely sum it up as "education's disaster area!" As if this lack of conceptualization has not been enough, the actual implementation of staff development programs has also attracted its share of criticism.

Concerning the low priority traditionally attributed to the activity, Howey (1976b), likened it to a "patchwork quilt":

> As in the case of a quilt, it is not the first order of business but rather something which can be worked on at the end of the day in a more relaxed and restful setting. The time allotted and the frequency of the delivery suggests that but 'remnants' of larger ideas and ideals are dealt with. Rarely are institutional goals co-ordinated with personal needs in these activities but approached in rather a random pattern. Finally, the intent is not one of major reform as much as basic maintenance - a protective cover (p. 1).

According to Arends, Hersh and Turner (1978), packaging and delivery of staff development for teachers has been unsatisfactory, taking on all the appearances of "the 6 o'clock evening news". Like the news, staff development activities have no rationality as to duration. That newscasts encompass exactly 30 minutes each and every evening, suggests a false

reality about the occurrence of newsworthy events! Requiring all teachers to undertake exactly five staff development days per year, is equally misleading as to the reality of individual teacher needs for professional development. Likewise, staff development "days" are about as ephemeral as one-night "love affairs":

> A one-shot, one time only in-service day will not suffice, and constitutes a waste of time and money. As a first step in a continuing process such one day sessions can be of value as a means of initiating ... dialogue. But in training sessions, as in love affairs, one night encounters do not bring lasting fulfillment, and are essentially degrading and dehumanising for all participants; and a series of one-night stands only multiplies the degradation and dehumanization. Yet in-service activities in the past have too often had the essential character of one-night stands (Dawson, 1978, p. 52).

Miller's (1977) disappointment is that so much staff development in schools has been "topless", in the sense that insufficient attention has been devoted to providing those in positions of educational leadership in schools with the understandings and skills necessary to have an impact on teachers. The ultimate futility of much of what masquerades as staff development led Houston and Freiberg (1979) to describe it as a game of "blindman's buff".

> Programs are fashioned without regard to research findings; without an integrated plan including long range goals; without being articulated with other resources, programs and community needs; and sometimes without input from those purported to benefit (p. 7-8).

A well developed perspective or point of view, would seem to be more important than a well developed program.

In summary, it is not hard to find reasons why, despite large amounts of money and effort, staff development has failed to produce spectacular results in schools. In many cases activities have not been developed in consultation with teachers (Wagstaff & McCullough, 1973; Schiffer, 1978; Freiberg, Townsend, Buckley & Berneman, 1980), activities have been unrelated to day-to-day problems of teachers (Wagstaff & McCullough, 1973; Freiberg, et al., 1978), and have failed to adequately acknowledge the

realities and constraints of teaching (Lieberman & Miller,1978; Williams, 1978; Schiffer, 1978). Little wonder that there has been a lack of commitment on the part of teachers! Leiter and Cooper (1978) summed it up well when they said, "staff development has failed largely out of irrelevance, diffusion, haphazardness, and superficiality" (p. 107).

Possibly the most damaging aspect of staff development in the past has been its assumption of a deficit model (Sergiovanni & Starratt, 1979) - teachers have certain skills and knowledge that continually requires improving and upgrading! Accordingly, what is required is training to improve those skills and make good the deficiencies. This view of teachers and the role of staff development is fortunately being replaced by a more enlightened view that regards professional development as a normal and expected part of daily life for all teachers. Even though growth may not necessarily occur in a rational or linear fashion (Lieberman & Miller, 1978, p. ix), this view does acknowledge that teachers need assistance in growing and developing personally and professionally in the job.

PROSPECTS FOR RESEARCH ON TEACHING

Alongside the efforts in staff development an equally curious and no less ineffectual enigma has arisen in the form of the sustained and quite separate endeavours of researchers in teaching. For many of the kind of reasons already mentioned so far findings from research on teaching have had limited currency in terms of impact on classroom practice. The situation is compounded by the fact that although workers in both staff development and research on teaching have the broadly similar purpose of seeking to effect reform and improvement in schools, neither has engaged in extensive exchange with the other.

At the risk of gross oversimplification, the absence of dialogue between staff developers and researchers in teaching, has produced a situation best portrayed by analogy. On the one hand we have numerous vehicles (i.e. procedures and techniques for staff development) without paying passengers (c.f. plenty of non-paying passengers in the form of irrelevant and non-validated knowledge of dubious impact on classroom outcomes). On the other hand, we also have lots of affluent potential passengers (i.e. findings from research on teaching) with no effective means of transportation! The promising and well articulated frameworks through which to achieve teacher growth and development (interactive research and development, Organisational Development, action research, teacher centres, etc.) stop well short of actually implementing knowledge that has been validated as being most worthwhile in teacher development. Those of us responsible for generating research on teaching are at the same time left wondering how to most effectively convey our conclusions to teachers so they can obtain greatest benefit. To finish off the transportation analogy! In an energy hungry world (dwindling educational dollars) we need to put a halt to the silly situation of cars running around without passengers, and think constructively about ways of getting the pedestrians back into the vehicles as paying passengers!! Past failures in staff development, and the generally ineffectual impact of research on teaching in improving classroom practice, may be different parts of essentially the same problem. Improving the image and efficacy of one may be extricably connected to the other.

It seems to be a universal problem that the vast majority of teachers are unaffected by findings from research on teaching. At the root of this is the fact that research does not usually directly address problems and issues close to the hearts and minds of teachers, nor does it involve teachers other than as research objects. There is nothing particularly

surprising about this. After all, teachers and researchers inhabit totally different worlds, they have different purposes, possess different time frames, enact different work styles and speak different languages.

Possibly more than anything else this Research, Development & Dissemination (RD & D) mode of educational change, with its implicit view of change as originating outside schools and having to be disseminated within schools for the benefit of those inside, has done a considerable disservice to the cause of incorporating research findings into classrooms (Smyth, 1981 a). The paradox was not lost on Lieberman (1980): "Teachers live daily in the image that researchers are attempting to describe" (p. 225). It is not surprising, therefore, that when research outcomes do inform practice, the findings are reported in inaccessible and largely incomprehensible educational journals.

Asking obvious questions like, "how can we improve research on teaching and make it more useful for teachers", exposes the real view we hold of teachers and the role we see research as playing in schools. This is something we have tended to treat rather too perfunctorily in the past. The traditional view pre-supposes that teachers should have research "done on them" (or at least for them) by "experts", and that research itself is a product to be applied in classrooms by ever-grateful teachers.

This view is akin to treating research findings like an agricultural fertilizer. It makes unwarranted assumptions that:

> One can take information and spread it among the populace. The very term (dissemination) assumes a lack of connection between the information and the people who would be the receivers (Lieberman, 1980, p. 1).

But are we asking the right sort of question? As Felder (1980) notes, re-orienting research so that it pursues problems and issues relevant to teachers, reporting the results in language teachers can understand, and

cultivating the 'linkage' agents necessary for dissemination and transfer into classrooms, could be construed as amounting to little more than tinkering with the empirical/rational basis of process-product research.

While we are ready to acknowledge the nature of the research and its mode of dissemination as one set of factors accounting for the limited impact which research on teaching has had, we are generally loath to recognise the very real but no less debilitating effects of trying to disseminate research on teaching given the realities of teaching and classrooms (Doyle & Ponder, 1977; Lieberman & Miller, 1978). Increasing the functional utility of research on teaching for teachers is certainly part of the problem. Looking only for "impediments" within research itself may not on its own produce the answers we seek. As Bussis (1980) said of process-product research - it is like a "merry-go-round":

> It propels us up and down and may occasionally jolt us with a provocative finding, but it leads us no closer to the heart of the problem (p. 4).

Maybe what we need to be doing is asking more fundamental underlying questions, like "how should research on teaching inform practice?"

Speculating on the possible utility of research on teaching in the light of what we know about teacher change, Fenstermacher (1979) suggested two ways: (a) conversion, which involves the development of rules to be imposed on teachers either by mandatory means, or via less direct means, such as providing support which is contingent upon the adoption of action amounting to the application of the rule; and, (b) transformation, where evidence and findings are presented to teachers with a view to bringing about changes in their beliefs, and hence their actions.

Fenstermacher's (1980) claims that the continuing call to bridge the research/practice gap by "conversion" or with "rules", has a partially

historical explanation. Referring to the work of Barr (1926) and others earlier this century on teacher effectiveness, Doyle (1978) pointed out that research was quite unashamedly directed towards the formulation of general laws to inform and justify administrative policy:

> In pragmatic terms, teaching effectiveness research was to rationalize judgements that administrators had to make about teacher selection and training. In doing so, such research would contribute to professional control of the substance of schooling. Within this framework, answers to the teaching effectiveness question, needed to be in the form of scientific "laws" readily translated into policies to guide evaluation and training (p. 145).

While we are certainly beginning to uncover findings that appear to "hold up" across a number of different settings, to continue to pursue the mandatory conversion route is to overlook the fact that many of the findings are still tentative and incomplete (Denham, 1980). Maybe we should not be looking for irrefutable conclusions. Good and Power (1976) expressed their view on the usefulness of findings from research on teaching in terms of enhanced possibilities for teachers, rather than as definitive and irrefutable conclusions:

> We suspect that the generalizations deriving from classroom research and theory have a different role from those of the natural sciences. They function not as predictors of future events but as guidelines for understanding particular situations and contexts. Thus, at best, generalizations about teaching derived from research act as guides to assessing the likely consequences of alternative strategies in complex educational situations. Such generalizations must necessarily be indeterminate since they cannot predict precisely what will happen in a particular case. But this does not decrease their value for the teacher: he is not interested in establishing general laws. Theories can be of value in specifying those dimensions which are relevant to an understanding of classroom phenomena, can extent the range of hypotheses (alternative strategies) considered, and sensitize the teacher to the possible consequences of his actions. Indeed, ultimately, the validity and usefulness of theory may rest in the hands of teachers .... that is whether it sensitizes them to the classroom context, helps them make more informed decisions, and to monitor their own behaviour (p. 47).

Besides, there are too many variables which render questionable the transfer of research findings to a single school or classroom. Not only

are there problems of misinterpretation likely to arise from the findings being taken out of context, there are difficulties with the validity of interpretations attached to them, and the business of excluding all the circumstances in which the findings do not apply. Trying to derive rules from research raises serious questions about the confidence we can place on the findings given levels of statistical significance, the way data were analysed, and sampling techniques used. An even more important issue concerns the impact this approach has upon the perceived competence of teachers and their self concept. According to Fenstermacher (1980), it represents a denial of teachers' freedom to think and act independently. Rather than educational administrators and policymakers thinking along these lines, they would be better advised to follow Denham's (1980) suggestion, "to share the ideas, encourage their use, and assist those who attempt to make their own changes" (p. 235).

According to Fenstermacher (1979) if we are really serious about the business of altering teacher behaviour through research on teaching then "it is necessary to come to grips with the subjectively reasonable beliefs of teachers" (p. 174), that is to say, what teachers believe to be true about their own teaching and learning. In practical terms this means providing teachers with the opportunity to question and test out the efficacy of the beliefs they hold about their teaching. Viewed in this way, findings from research on teaching, therefore, provide a base-line against which teachers can sound-out and compare their beliefs and classroom practices. The outcome may or may not involve actual change. Indeed, the process may serve the useful purpose of providing confirmation that tried and tested classroom practices, in fact have empirical foundations (Smyth, 1981 b). As Fenstermacher (1980) expressed it:

> Bridging with evidence does not require a practitioner to modify beliefs every time research findings are presented. It requires only that the practitioner weigh seriously the results of the research. To require more would be to place greater confidence in

> research on teaching than it may legitimately command. Where research findings conflict with beliefs for which there are other reasonable grounds, the practitioner may be justified in choosing to adapt or ignore the conflicting findings (p. 131).

The suggested emphasis then is upon an approach involving the collection of data that reflect on aspects of a teacher's beliefs and actions, comparing these with findings from research on teaching, and either having the beliefs confirmed or challenged. The process of change under these circumstances comes about as a result of observation and introspection. The end result is described by Fenstermacher (1979) as a state of informed "objective reasonableness" about teaching beliefs.

This approach is not to be confused with any attempt to convert teachers into being "rational-adopters", where, in the words of Doyle and Ponder (1977):

> ... the weight of scholarly evidence, together with an appropriately inspirational rhetoric, will compel any 'reasonable and intelligent' teacher to rush out and try the latest 'new idea' in education (p. 4).

Rather, the strategy being suggested acknowledges the point made by Feiman and Floden (1980) that findings from research on teaching serve to make teachers more aware of their own beliefs and actions, and sensitizes them to a range of alternatives they may employ in particular situations. It is not a smorgasbord approach - it is premised on the belief that as well as expanding teachers' horizons, it is necessary to also transform their understandings of situations (Feiman & Floden, 1980).

Provision of findings from research on teaching as evidence to be trialled experimentally and tested in classrooms acknowledges the important point noted by a number of writers (Lieberman, 1980; Lortie, 1975; Doyle & Ponder, 1977) that teaching styles are highly personalized and learned on the job. What becomes important in situations where cherished beliefs are being questioned, is the balance between "support" and "challenge" provided to teachers (Feiman & Floden, 1980).

The points made so far about deficiencies in staff development and difficulties in utilizing findings from research on teaching are worth summarizing.

Howey and Joyce (1978) have established that staff development in schools is in a less than healthy state. We have seen that this malaise is attributable to a number of factors. Serious questions are being asked about whether we have inflicted a grave disservice upon mature professional teachers by adopting a "deficit" approach with its presumption that teachers' skills and knowledge have to be continually upgraded. Doubts are also being expressed about the actual effectiveness of much staff development in terms of improving classroom performance and learning. The picture that emerges is one of very little staff development being conceptualized as a normal and integral part of teacher growth, or indeed being incorporated into the day-to-day functioning of schools. Evidence of the general low priority and disregard for meaningful staff development can be gauged by the intermittent nature of its provision, and its delivery at the end of a day when teacher energy and enthusiasm are sapped. Given the prominence of the human factor in schools, and the fact that teachers' salaries constitute around 90% of the budget, this disregard is blatant. The separation of staff development from the complexities and realities of classrooms when it does occur, while explainable in terms of the absence of on-site expertise and insufficient incentives, creates problems of transferring back into the classroom, knowledge and skills acquired elsewhere. Like the small child who asked his father, "Daddy, where does the snow go when it melts?", we may well question where does research on teaching end up? (Fenstermacher, 1980). If only the answer to our question were as clear as that to the small child!

The difficulties in utilizing and applying knowledge gained from research on teaching to inform classroom practice, are not dissimilar to

those within staff development. There is probably a modicum of truth in Stenhouses's (1978) lament about the inability of research to improve teaching practice: "it is as if our society had a sizeable community of virtuoso structural engineers and yet its bridges kept falling down" (p. 1). Other factors notwithstanding, teachers have not been easy to convince of the utility of research. As Herron (1979) noted:

> Practitioners in elementary and secondary schools have always looked upon research with a jaundiced eye. What does not look trivial or downright inane, seems to be impractical and out of touch with the realities of the classroom. To some extent such skepticism has been deserved (p. 87).

Its ultimate usefulness to teachers probably lies somewhere along the continuum between "it has nothing to offer teachers", and "it provides all the final answers for teachers".

Even assuming teachers were in the habit of turning to the research literature, which is most unusual (Hogben, 1980), there are a host of other problems ranging from the failure of research to address issues of concern to teachers, the non-involvement of teachers except as research subjects, the inaccessibility of final reported results, the esoteric style used in reporting, and the tentativeness and lack of generalisability of many of the findings. Disturbing also is the lack of consensus in the way findings should be used: as rules to be disseminated and enforced by mandate or sanction, or as evidence to be tested out in the clinics of individual classrooms.

The problem is as much related to a suitable means for effective staff development, as it is to the issue of how to make best use of research findings.

UTILIZING RESEARCH ON TEACHING AS "CLINICAL" STAFF DEVELOPMENT

Our seeming inability to generate effective on-going staff development activities within schools, and the problems plaguing us as how best to use knowledge and findings from research on teaching, suggest that we may need to consider an alternative framework for both. From the viewpoint of staff development, William's (1978) analyses of two major studies on change processes in schools (I/D/E/A and Rand), led him to the conclusion that such a framework should have five essential features:

1. The school site should be an important component of the change process.

2. Teachers and administrators should be provided the skills and time necessary to focus their attention on school-site problem solving.

3. Staff development activities should flow from and be related to the problems identified by the staff.

4. Teachers and administrators have within themselves a considerable amount of expertise to bring to bear on the problems they face. Collegial sharing within and among schools should figure prominently in staff development activities.

5. Some regional or local agency should be used to help school districts and school sites in developing their problem-solving capacity in identifying, designing and effectively utilizing appropriate staff development in-service activities (pp. 99-100).

While not dismissing the importance of macro factors at the organisational and extra-organisational level and the ways these can enhance and inhibit what transpires within schools, classrooms remain the real "production centres" within schools (Barr, 1980a; 1980b). Staff development schemes with any hope of working, need to recognise this crucial imperative. McNergey, Carrier, Leonard and Harootunian (1979) provided the components of a framework reflecting this focus:

1. It should be *personalised* in that the conditions developed recognise the abilities and needs of individual teachers.

2. It should be *interactive* in that the characteristics of teachers, teaching behaviour, teaching tasks, and learning environments depend upon and react with each other.

3. It should be *contemporaneous* or concerned with issues of immediate interest and concern to teachers.

4. It should be *developmental* in that performance of teachers is viewed over time.

5. It should be *reciprocal* in that teachers are affected by, and in turn exert an influence on the staff developer.

6. It must be *practical* to have positive effects on teachers (McNergey, Carrier, Leonard and Harootunian, 1979).

The emphasis is clearly upon an interactive or collaborative mode of professional development which is squarely based on the classroom interests, needs and problems of teachers, with provision for expertise and assistance from outside.

After analysing 200 studies on staff development, Joyce and Showers (1980) arrived at much the same conclusions. According to them the most effective schemes had five major components:

1. presentation of theory or description of skill strategy
2. modelling or demonstration of skills or models of teaching
3. practice in simulated and classroom settings
4. structured and open-ended feedback
5. coaching for application (hands-on, in-class assistance with transfer of skills and strategies).

In varying degrees, all of the aspects outlined by Williams (1978), McNergey et al (1979), and Joyce and Showers (1980), are present in the staff development strategy known as *clinical supervision* (Goldhammer, 1969; Cogan, 1973). The term was originally coined by Cogan in the 1950's to describe a cyclical set of procedures used with student teachers in the Harvard MAT program. Although it has an unfortunate pathological connotation (Denham, 1977), clinical supervision actually encompasses "those efforts to improve instruction that involve in-class and face-to-face interactive relationships between teachers and supervisors" (p. 33). More particularly, the purposes of clinical supervision have been summarised as:

1. helping the teacher to expand his own perceptions so that he may find his own strengths and weaknesses more readily;

2. helping the teacher to scientifically view his own teaching so his outward teaching behaviour is *synchronized* with his own inward intent; and

3. helping the teacher to solve whatever classroom problems he wants to solve.

(Moore & Mattaliano, 1973, p. 2).

While the prime objective behind clincial supervision is the improvement of instruction, its strength lies in the intensive conferencing that occurs between teacher and supervisor. As Blumberg and Amidon (1965) note: "The manner in which the supervisor conducts himself and the information he tries to transmit are elements crucial to the outcome of the conference" (p. 1).

Supervision of this kind is clinical in the sense that it occurs "in the clinic of the classroom" (Willems in Cogan, 1973, p. ix). It rests on the presumption, quite apart from issues of accountability or evaluation, that much of what is involved in teaching is not only observable, but also comprises an intellectual and social act that should be subject to rigorous analysis (Mosher, 1972). The supervisory strategy is founded on the belief that:

> Teaching is a complex and curious endeavour that invites analysis, that supervision is a partnership in inquiry in which two persons compare intriguing alternatives, and that the supervisor is simply a person who has had more experience in the conduct of enquiry ... rather than an expert who gives admonitions (Flanders, 1976, p. 48).

The reality of this is embodied in the supervisor assisting the teacher to reduce any incongruity between intent and action (Warner et al, 1979), with commitment throughout being on "the dignity and the worth of the teacher" (Thorlacius, 1978, p. 1).

Given that teaching does not occur randomly, but rather in some kind of observable patterned sequence and that much of the teacher's time is spent in isolation from professional colleagues, clinical supervision

seeks to inform and support the teacher "by direct feedback ... on aspects of his or her teaching, that are of concern to the teacher ..." (Reavis, 1976, p. 363).

Under normal conditions, teaching has been likened to the throwing of darts when the target is hidden from view and no information is provided about the scores! (Uni. of Alberta, 1978). Clinical supervision to its credit seeks to remedy this situation through the provision of feedback to teachers in the form of non-evaluative data about teaching performance. Accordingly, when supervisor and teacher interact they are "participants in a temporary social system, the aim of which is to improve the teachers' teaching" (Blumberg & Cusick, 1970, p. 126). As Martin and Reed (1977) indicate, the procedures involved in clinical supervision coincide well with the criteria considered crucial in the acquisition of teaching skills:

1. *specification* of teaching behaviours in precise terms;
2. focussed *practice* in the use of such skills;
3. prompt *feedback* about that practice.

Needless to say, the supervisory process works best under conditions where the parties work as a collaborative problem-solving partnership.

Although numerous variants and hybrids exist, there are essentially five stages (Goldhammer, 1969) to the clinical supervision cycle, although Cogan (1973) has envisaged as many as eight.

During the pre-observation conference phase, teacher and supervisor share instructional goals as they jointly plan and clarify what educational objectives are to be achieved during a particular lesson, how, and with what anticipated results. Agreement is reached during this phase as to the specific aspects of the lesson to be observed and recorded by the supervisor, and the mode of data collection. In the next phase, the lesson is observed

and data collected by the supervisor. During the reflective phase that follows, the teacher seeks to arrive at an independent opinion about the efficacy of the lesson and its focus while the supervisor sorts and analyses the data in preparation for a conference or de-briefing session with the teacher. During this post-observation conference phase, teacher and supervisor exchange opinions about the focal aspect of the lesson, with the supervisor concentrating his efforts initially on revealing the data. In the final phase, the supervisor seeks to check out his own perceptions of his handling of the various phases of the clinical supervision cycle, either introspectively or in concert with a fellow supervisor.

In the closing pages of the first book on clinical supervision, Goldhammer (1969) was excited and optimistic about the promises and possibilities of extensive usage of the clinical model. A decade later and in the second edition of the book, while still thoroughly convinced of its efficacy, Goldhammer, Anderson and Krajewski (1980) sounded disappointed: "the ideas and practices are insufficiently known and appreciated" (p. 1). Reflecting a more sober realisation that innovations of this kind generally occur on a broken front, and that substantial progress has been made, albeit slowly, Sullivan's (1980) state-of-the-art review made the point that "there are more questions than answers, but the questions come from an identifiable design" (p. 42).

Indeed as the literature cited earlier on staff development attests, the climate for the acceptance of clinical supervision as a form of school based staff development is probably more favourable now than at any other time. Notwithstanding the host of restraining and inhibiting factors that account for its past lethargic legacy including parsimonious conceptualisation, limited literature, and difficulties in training people in the processes and procedures, one of the major current problems with clinical

supervision is simply its nomenclature! As the mentors were moved to comment recently: "Perhaps we should seek to find a better name ..." (Goldhammer, et al, 1980, p. 5).

The other undeniable fact relates to clinical supervision's labour intensive nature. But as Jackson (1971) has noted, if we really want teacher improvement we may have to be prepared to pay the cost:

> If we are going to pay more than lip service to the goal of helping teachers make sense of what they are doing, we must be prepared to face the fact that the costs of education could double in the process. (p. 29).

While acknowledging the point, others claim the additional costs of alternative forms of staff development really amount to a case for the more effective utilisation of existing resources. According to Wood and Thompson (1980), the ratio of staff developers (inclusive of school people and outsiders) to teachers in the U.S.A., could be as favourable as 1 to 8.

As a mechanism of staff development for teachers, clinical supervision has one severe limitation, namely its inherent reliance on participant intuition and experience as the major source of new ideas. This limits the extent to which teaching behaviour known to be related to pupil learning, can be improved. Although there is evidence to suggest that the model is moderately successful in promoting collaborative introspection, feelings of well-being, as well as improved interpersonal, observational and analytical skills relating to teaching (Eaker, 1972; Reavis, 1977; Shuma, 1971; Garman, 1971; Skarak, 1973, Boulet, 1980), its utility beyond that is limited largely by participant knowledge and experience of the teaching process. There is little to substantiate the claim that clinical supervision, as a process, enhances levels of pupil learning.

Even though clinical supervision purports to assist teachers in clarifying their strengths and weaknesses, encouraging them to

scientifically analyse their own teaching, and developing in them an ability to synchronize intent with behaviour, there are limits to how far introspection of this kind, on its own, can result in changed teaching behaviour that improves pupil learning. What is required, it would seem, is soundly-based knowledge about alternative teaching strategies relating to desired pupil outcomes, that can be trialled experimentally in the classroom at the same time as introspection occurs. As Grimmett (1981) comments:

> The leading writers on clinical supervision all posit the need for a rigorous analysis of teaching based on insights derived from funded knowledge, but only Cogan (1973) and Mosher and Purpel (1972) actually review research on teaching as it related to instructional supervision (p. 2).

Despite claims about the need for supervisors to have a knowledge about research on teaching, "if not in detail, at least in a general way" (MacKay & Osoba, 1978), it is surprising that there has been so little research and discussion on the possible linkages between research on teaching and the clinical (or any other mode) of instructional supervision. The supervision literature generally (Sergiovanni & Starratt, 1979; Blumberg, 1974; Harris, 1975; Alfonso, Firth & Neville, 1975), has displayed an unfortunate lack of interest in the findings from research on teaching. To their credit Wiles and Bondi (1980) do address this question.

Three recent stuides have attempted to address this issue. A theoretical paper by Grimmett (1981) traces the nature of possible conceptual linkages between research on teaching, especially that pertaining to teacher thought processes, and its possible connection with clinical supervision. Boulet (1980), in a study in progress, required principals training to be clinical supervisors to undertake a unit of study on the theory of effective teaching. He examined the problems they encountered in trying to relate the principles and procedures of clinical supervision, to the research findings of effective teaching. An Australian pilot study (Smyth, 1981 c)

discussed below, reports on the selective introduction of research findings into the repertoire of experienced teachers, using principals trained in clinical supervision.

SOME AUSTRALIAN CASE STUDY DATA

Research of an experimental type on staff development is unusual and indeed difficult to undertake. As Mazzarella (1980) notes: "Control groups are rarely used because no one wants to be left out of the exciting new program" (p. 182). For this reason and because of the exploratory and tentative nature of the phenomenon being investigated, the Australian study employed the case study methodology. What follows represents a descriptive account of the processes that occurred.

A principal and a teacher in each of two elementary schools were trained on-site in the rationale, processes and procedures of clinical supervision, and an attempt made to use this model in the incorporation of findings from research on teaching into classroom practice. The university researchers enacted the dual roles of staff developers and participant observers of the processes they were introducing into the schools. Activities were of two distinct kinds:

(a) a "familiarisation" phase in which the school participants were introduced to the model of clinical supervision and trained in the skills and processes; and

(b) an "implementation" phase in which the clinical supervision framework was used as the vehicle for implementing some of the findings from research on teaching.

Data, on both aspects,were collected over a full school year using a variety of methods: structured interviews, tape recorded conferencing sessions, response-free questionnaires, observations, anecdotal field notes, video-tapes, and school participant diaries.

Familiarisation Phase

From the beginning there was a commitment, in theory and practice, to the concept of on-site job-embedded professional development for both supervisors and teachers. To remove either group from their schools, at the early stage or even for short periods, seemed to be a basic contradiction of the philosophy espoused in clinical supervision. Even though they had to contend with the endless and mindless interruptions and frustrations that punctuate daily life in schools, the research team believed that more was to be gained through a closer understanding and appreciation of these realities at first hand, than by "solving" the problem in removing the participants to the serenity of a retreat. If the process was going to work, the team believed it had to be sufficiently robust to withstand the rigors of interference from other school routines. Besides, a willingness to make internal rearrangements within the school and to stick to them regularly provided the researchers with a valuable indirect index of participant commitment and thus the value they ascribed to the activity. Continual interruptions, with no attempt to find alternatives tells its own grim story!

Accordingly, minor timetable adjustments were made and priorities rearranged within the schools to free-up time for the participants to meet with researchers for two hours of school time each week. Initial induction for supervisors, with teachers present as well, took the form of informal discussion and demonstration using video-tapes. This was followed by hands-on experience for the supervisor in the classroom with the teacher. The role of the researcher was to provide constructive support by helping supervisors design classroom observation systems, being in class and collecting independent data for reliability checking, and providing support through "phantom" pre- and post-observation conferences before the real occurrences with the teachers. The opportunity of being able to discuss

real *in situ* problems associated with these aspects during the formative stage of hands-on experience, as well as rehearsing the processes, emerged as one of the most valuable features of this study. As the participants gained confidence and moved beyond this tentative stage, the researchers reduced and changed the type of support provided. Instead of "shadowing" the participants, the researchers had them tape record their own conferencing sessions, despatch them for transcription and analysis, and receive the transcripts back along with feedback.

No attempt was made during this phase to bring the school participants into contact with research findings. It was considered important that they first explore the nature of their new relationship, develop a feel for what it was like to engage in professional development of this kind, and to encounter the practical problems and possibilities of clinical supervision, before taking the next step. In practice, this meant they selected their own area of focus for each clinical session, investigating matters of interest and concern to them!

Recent review of research on effective staff development strategies confirm that the principles embodied in clinical supervision and as implemented in this study, correspond closely. The approach:

1. was on-site and job-embedded (Yarger, Howey & Joyce, n.d.; Howey, 1976 a; Williams, 1978; Wood & Thompson, 1980; Mazzarella, 1980) - *the participants were not taken out of schools;*
2. was personalised, interactive and contemporaneous (McNergey et al, 1979; Wood & Thompson, 1980; Mazzarella, 1980) - *day-to-day problems were investigated in classroom contexts;*
3. recognised the latent potential within teachers and principals for collegial sharing (Williams, 1978; Wood & Thompson, 1980) - *daily practices of teachers provided a basis for developing collaborative problem solving relationships;*

4. was based on the realistic belief that schools need help and support in developing problem solving abilities (Williams, 1978) - *outside support was provided, although in a fashion that allowed for gradual independence by school participants;*
5. on-going and stretching throughout the year (Mazzarella, 1980) - *frequent contact was maintained by all participants during the year.*

The operational criteria of Joyce and Showers (1980) as to proven implementation strategies were also satisfied, namely:

1. presentation of theory or description of skills strategy; *through discussion and interpretation of literature;*
2. modelling or demonstration of skills; *through use of videotapes;*
3. practice in classroom settings; *the daily concerns of teachers in their own classes were the focus;*
4. structured and open-ended feedback; *discussions and provision of annotated transcripts of conferences;*
5. coaching for application; *through "phantom tracking" during pre and post observation conferences.*

The procedures implemented in the Australian study corresponded closely with what Bush (1980) regarded in his observations of the dissemination phase of BTES as:

> Some new and more powerful models for training ... One model suggests: presentations of theory; rooting specific training in a meaningful conceptual framework; practice; observation and providing feedback; coaching on the job for installation (of practice) (p. 3).

Implementation Phase

There was no rational pre-conceived plan as to when the school participants would be "ready" to move into the phase that involved the use of clinical supervision to apply findings from research on teaching. It was to occur when they demonstrated that they were comfortable with mastery of the

various observational, conferencing and inter-personal skills. Less thar half-way into the year it was clear that this point had been reached. It coincided with what Goens and Koehn (1980) have labelled "supervisory game playing - going through the motions and not expecting any positive outcomes to result from the supervisory process" (p. 39). The researchers were placed under increasing pressure to provide guidance as to productive areas that participants might focus on in their clinical encounters. The time was right!!

Assimilation and synthesis of the amorphous literature on research on teaching proved problematic. An analysis was finally made of a number of reviews (Borich, 1977; Brophy, 1979; Good, 1979; Good & Grouws, 1979; Hogben, 1980; Fedigan, 1978; Peterson & Walberg, 1979; Rosenshine, 1976; Smyth & King, 1978; Smyth, 1980) that displayed consistency within what Bloom (1980) described as "teacher controllable variables". The final list corresponds closely with that used by MacKay (1979).

The research findings were not presented to the participants in any kind of prescriptive or "teacher should" manner. Rather, they were conveyed in the context of "some useful proven ideas they might like to try out and monitor in their own situations". The findings were, therefore, highly negotiable entities. Negotiation was based on how the parties interpreted the findings, what the teacher considered relevant to him at the time, and what the supervisor felt he could adequately obtain observational data upon. Along with lesson plans, teaching strategies, expected outcomes and the like, teacher and supervisor negotiated as to which particular research finding was to be the focus of observation in the coming lesson. In fact, it was somewhat more complex in one school. Because the participants felt the teacher's behaviour would be biased if he knew exactly what the supervisor was focussing his attention upon, they isolated a "bundle" of findings,

from which the supervisor would select one without telling the teacher, until after the observation. The teacher felt comfortable with this because it "kept him more honest in his teaching".

What teacher and supervisor were really doing here, at least in their initial encounter with a particular research finding, was exploring and testing out the teacher's "subjectively reasonable beliefs" (Fenstermacher, 1980) about his teaching within the context of that particular research finding. The subsequent analysis of observational data relating to the lesson, and the knowledge that the teacher was required to "give an account" in his own terms, served to crystallise this aspect. Any discrepancies between intent and action would appear in the post observation conference, indicating a possible need for the participants to pursue the issue further. It could take a number of successive cycles in which further discussion occurred and more observational data presented until a negotiated position was reached approximating the teacher's "objectively reasonable beliefs" about that particular aspect of his teaching. Apart from clarifying beliefs about teacher action, other immediate outcomes possible from this process comprised:

(a) confirmation of teacher beliefs about action;

(b) a commitment to change actions so that they aligned with beliefs;

(c) a rejection of research finding as being incompatible with beliefs or else impossible to implement.

The Australian case studies revealed a wealth of information about the utility of clinical supervision, at least to the participants in the particular schools where it was trialled experimentally. This mode of on-site professional development was perceived by the participants as being more meaningful than other alternatives in that it enabled both supervisor and teacher to gain a greater sensitivity to each other and a better

understanding of themselves, as well as involving them in issues that were germane. Trying out findings from research on teaching within the framework of the clinical model, while collecting data to corroborate the efficacy or otherwise of these findings, appealed to the participants' sense of a balance between needed authentication for classroom practices, and the practicality of actually implementing specific behavioural changes in classrooms. The participants reasoned that if findings were to work, in the sense of holding up in specific circumstances, then this could only occur if teachers and supervisors had the opportunity of exploring, modifying and, if necessary, rejecting particular findings.

As Flanders (1976) rightly pointed out, there are ethical issues involved in all of this, particularly from the supervisor's perspective. He indicated that it is presumptuous to advise a qualified colleague on how to teach, and that there are psychological risks associated with prescribing actions that must be followed. We are reminded in this regard of Good's (1979) dictum:

> I don't think it's possible to tell teachers how to teach, although it is possible to provide concepts that may allow them to reconsider their behaviour and perhaps improve instruction (p. 55).

This is consistent with the approach adopted in the Australian study. There is a need to keep a balance between the extent to which the supervisor is able to exploit the fund of knowledge he brings to the situation, while also protecting the rights of the teacher as an autonomous professional in his own classroom. Flanders (1976) claimed that this delicate balance would be maintained if:

1. Both supervisor and client seek to explore instructional changes that are expected to promote the welfare of pupils.
2. The teacher should understand and select whatever plan of action is to be followed.
3. It is the supervisor's responsibility to influence the plans so they are as powerful and valid as possible.

4. It is the supervisor's responsibility to guide the exploration of teaching toward practical ends that can be achieved, ends that consider the teacher's present performance and the next steps for improvement (p. 48).

Paradoxical as it might seem, it needs to be remembered as Cogan (1973) has pointed out, that the clinical relationship is based on an unequal sharing of different kinds of knowledge. The supervisor possesses expertise in the areas of inter-personal and conferencing skills, methods of classroom observation and analysis, and knowledge about findings from research on teaching. The teacher possesses different, but equally important, knowledge based on an understanding of the specific classroom, the children and the school sub-societies to which they belong, and what is workable under the circumstances. Neither fund of knowledge is inherently superior - one is complementary to the other in bringing about classroom change in the direction of improving pupil welfare and learning.

CONCLUSION

The interface between the findings from research on teaching and staff development of teachers, is an important but neglected one. The position adopted in this paper has been that neither area has been able to come to fruition because of a lack of meaningful dialogue with the other. Staff developers have not generally been prepared to capitalise on the substantive body of findings from research on teaching, while researchers in teaching have tended to largely ignore the new and promising models in the area of staff development. While certainly not a panacea for all the problems confronting our schools, a more integrated approach between the two would seem to hold more hope for both, in terms of impact at the classroom level.

One imperative that needs to be acknowledged is the reality of the way in which adults, and teachers in particular, learn and grow professionally. Evidence to hand so far suggests that this is most likely to occur in a context which emphasises a close integration between new ideas and the actual work-site of the classroom, an opportunity for developing collegial relationships through a problem-solving approach, and where feedback about teaching performance is of a non-evaluative type. A scheme that embodies these, known as clinical supervision, was piloted in an exploratory study in two Australian schools as a mechanism for implementing findings from research on teaching. While obviously not generalisable beyond the specific sites, the approach embodied in the model and the processes of clinical supervision, looks like a promising possibility.

REFERENCES

Alfonso, R.J., Firth, G.R., & Neville, R.F., Instructional Supervision: A Behavior System, Boston: Allyn & Bacon, 1975.

Arends, R., Hersh, R., & Turner, J., In-service education and the six o'clock news. Theory into Practice, Vol. 17, No. 3, 1978, 196-205.

Barr, A.S., Characteristic Differences in the Teaching Performance of Good and Poor Teachers of the Social Studies. Public School Publishing, Bloomington, Illinois, 1926.

Barr, R., Formulations of instruction and learning: a look at levels of organization and aggregation. Paper presented to annual meeting, A.E.R.A., Boston, 1980a.

Barr, R., School, class, group, and pace effects on learning. Paper presented to annual meeting A.E.R.A., Boston, 1980b.

Bloom, B.S., The new direction in educational research: alterable variables. Phi Delta Kappan, February 1980, 382-385.

Blumberg, A., Supervisors and Teachers: A Private Cold War. McCutchan, Berkley, Cal. 1974.

Blumberg, A., & Amidon, E., Teacher perceptions of supervisor-teacher interaction. Administrators' Notebook, Vol. 14, No. 1, 1965, 1-8.

Blumberg, A., & Cusick, P., Supervisor-teacher interaction: an analysis of verbal behavior. Education, Vol. 91, 1970, 129-31.

Borich, G., (ed.) The Appraisal of Teaching: Concepts and Process. Addison-Wesley, Reading, Mass. 1977.

Boulet, F.X., The effects of exposing school principals to the use of clinical supervision for classroom observation. Unpublished doctoral dissertation, University of Alberta, 1980, (in progress).

Brophy, J.E., "Teacher behaviour and student learning". Educational Leadership, Vol. 37, No. 1, 1979, 33-38.

Bush, R.N., The beginning teacher evaluation study impacts the classroom: summary report of the BTES information-exchange and conference. Los Angeles, May 21, 1980. BTES Newsletter, No. 7, August 1980.

Bussis, A.M., Collaboration for what? Paper presented to annual meeting, A.E.R.A., Boston, 1980.

Cogan, Morris Clinical Supervision. Houghton Mifflin, Boston, 1973.

Davies, D., Notes and working papers for the U.S. Senate Sub-Committee on education, April 1967. Cited in McCullough and Wagstaff, 1973.

Dawson, A.J., Criteria for the creation of in-service education programs. Canadian Journal of Education, Vol. 3, No. 1, 1978, 49-60.

Denham, A., Clinical supervision: what we need to know about its potential for improving instruction. Contemporary Education, Vol. 49, No. 1, 1977, 33-37.

Denham, C.H., Lessons for policy makers. In C. Denham & A. Lieberman, (eds.) Time to Learn. National Institute of Education, Washington, D.C. 1980, 231-38.

Doyle, W., Paradigms for research on teacher effectiveness. In L.S. Shulman, (ed.) Review of Research in Education, F.E. Peacock, Itasca, Ill. 1978, 163-98.

Doyle, W., & Ponder, G.A., The practicality ethic in teacher decision-making. Interchange, Vol. 8, No. 3, 1977, 1-12.

Eaker, R.E., An analysis of the clinical supervision process as perceived by selected teachers and administrators. Unpublished doctoral dissertation, University of Tennessee, 1972.

Fedigan, L., School based elements related to school achievement. Unpublished paper, University of Alberta, May 1978.

Feiman, S., & Floden, R.E., Should teachers be taught to be rational? Paper presented to annual meeting, A.E.R.A., Boston, 1980.

Felder, D.W., Incentives and systemic change. Paper presented to annual meeting, A.E.R.A., Boston, 1980.

Fenstermacher, G.D., A philosophical consideration of recent research on teacher effectiveness. In L.S. Shulman, (ed.) Review of Research in Education, F.E. Peacock, Itasca, Ill. 1979. 157-85.

Fenstermacher, G.D., On learning to teach effectively from research on teacher effectiveness. In C. Denham & A. Lieberman, (eds.). Time to Learn. National Institute of Education, Washington, D.C., 1980, 127-37.

Flanders, N.A., Interaction analysis and clinical supervision. Journal of Research and Development in Education, Vol. 9, No. 2, 1976, 47-57.

Freiberg, H.J., Townsend, K., Buckley, P., & Berneman, L., Does in-service make a difference? Paper presented to annual meeting, A.E.R.A., Boston, 1980.

Garman, N.B., A study of clinical supervision as a resource of college teachers of English. Unpublished doctoral dissertation, University of Pittsburgh, 1971.

Goens, G.A., & Koehn, J.J., Instructional supervision: an active role for teachers. Illinois Schools Journal, Vol. 59, No. 4, 1980, 34-39.

Goldhammer, R., Clinical Supervision: Special Methods for the Supervision of Teachers, Holt, Rinehart & Winston, New York, 1969.

Goldhammer, R., Anderson, R.H., & Krajewski, R.J., Clinical Supervision: Special Methods for the Supervision of Teachers. 2nd Edition. Holt, Rinehart & Winston, New York, 1980.

Good, T.L., & Power, C.N., Designing successful classroom environments for different types of students. Journal of Curriculum Studies. Vol. 8, No. 1, 1976, 45-60.

Good, T.L., Teacher effectiveness in the elementary school. Journal of Teacher Education. Vol. 30, No. 2, 1979, 52-64.

Good, T., & Grouws, D., Teaching and mathematics learning. Educational Leadership. Vol. 37, No. 1, 1979, 39-45.

Grimmett, P.P., Clinical supervision and teacher thought processes. Canadian Journal of Education, Vol. 6, No. 3, 1981 (in press).

Harris, B.M., Supervisory Behavior in Education. 2nd Edition. Englewood Cliffs, New Jersey, Prentice-Hall, 1975.

Herron, J.D., Closing the gap between research and practice. Viewpoints in Teaching and Learning, Vol. 55, No. 1, 1979.

Hogben, D., Research on teaching, teaching and teacher training. Australian Journal of Education. Vol. 24, No. 1, 1980, 56-66.

Houston, W.R., & Freiberg, H.J., Perpetual motion, blindman's buff, and in-service education. The Journal of Teacher Education. Vol. 30, No. 1, 1979, 7-9.

Howey, K., & Joyce, B., A data base for future directions in in-service education. Theory into Practice. Vol. 17, No. 3, 1978, 206-11.

Howey, K.R., Putting in-service teacher education into perspective. The Journal of Teacher Education. Vol. 27, No. 2, 1976a, 101-05.

Howey, K.R., Toward more effective job-embedded in-service education. Teacher Corps. Network, Fordham University, New York, 1976b.

Jackson, P.W., Old dogs and new tricks: observations on the continuing education of teachers. In L. Rubin (ed.) Improving In-Service Education: Proposals and Procedures for Change. Allyn & Bacon, New York, 1971, 19-36.

Joyce, B., & Showers, B., Improving inservice training: the messages of research. Educational Leadership. Vol. 37, No. 5, 1980, 379-85.

Leiter, M., & Cooper, M., How teacher unionists view in-service education. In A. Leiberman & L. Miller (eds.) Staff Development: New Demands, New Realities, New Perspectives. Teachers College Press, New York, 1979, 107-25.

Lieberman, A., & Miller, L., The social realities of teaching. In A. Lieberman & L. Miller (eds.) Staff Development: New Demands, New Realities, New Perspectives. Teachers College Press, New York, 1979, 54-94.

Lieberman, A., Dissemination: the jargon and the reality. In C. Denham & A. Lieberman, (eds.) Time to Learn. National Institute of Education Washington, D.C., 1980, 223-30.

Lortie, D., School Teacher: A Sociological Study. University of Chicago Press, Chicago, 1975.

MacKay, D.A., & Osoba, E., New directions in teacher supervison. The Canadian Administrator, Vol. 18, No. 3, 1978, 1-5.

MacKay, D.A., Project QUEST: teaching strategies and pupil achievement. University of Alberta: Centre for Research on Teaching. Occasional Paper Series, Research Report, No. 79-1-3, 1979.

McLaughlin, M.W., & Marsh, D.D., Staff development and school change. In A. Lieberman & L. Miller (eds.) Staff Development: New Demands, New Realities, New Perspectives. Teachers College Press, New York, 1979, 69-94.

McNergney, R.F., Carrier, C.A., Leonard, L., & Harootunian, B., Teacher development: an interactive approach. Paper presented to annual meeting, A.E.R.A., San Francisco, 1979.

Martin, J., & Reed, M.R., Formative evaluation: the Simon Fraser Model. Challenges in Educational Administration. Vol. 14, No. 3, 1977, 16-20.

Mazzarella, J.A., Research Information Service: Synthesis of research on staff development. Eric Clearinghouse on educational management. Educational Leadership. Vol. 38, No. 2, 1980, 182-5.

Miller, W.C., "What's wrong with in-service education? It's topless" Educational Leadership, Vol. 35, No. 1, 1977, 31-34.

Moore, J.J., & Mattaliano, A.P., Clinical Supervision: A Short Description. West Hartford, Conn: West Hartford Public Schools, 1970, ERIC Document Reproduction Service. No. ED 064235.

Mosher, R.L., Clinical supervision: the analysis of teaching. Teacher Education, Spring 1972, 22-41.

Mosher, R.L., & Purpel, D.E., Supervision: the Reluctant Profession. Houghton Mifflin, Boston, 1972.

Peterson, P.L., & Walberg, H., (eds.) Research on Teaching: Concepts, Findings, and Implications. McCutchan, Berkeley, Cal. 1979.

Reavis, C. A., Clinical supervision: a timely approach. Educational Leadership. Vol. 33, No. 5, 1976, 360-6.

Reavis, C. A., A test of the clinical supervision model. The Journal of Educational Research. Vol. 70, No. 6, 1977, 311-15.

Rosenshine, B., Classroom instruction. In N. Gage (ed.) The Psychology of Teaching Methods. 75th N.S.S.E. Yearbook. University of Chicago Press, Chicago, 1976.

Schiffer, J., A framework for staff development. In A. Lieberman & L. Miller (eds.) Staff Development: New Demands, New Realities, New Perspectives. Teachers College Press, New York, 1979, 4-22.

Sergiovanni, T., & Starratt, J., Supervision: Human Perspectives, (2nd Edition) McGraw-Hill, New York, 1979.

Shuma, K.Y., Changes effectuated by a clinical supervisory relationship which emphasize a helping relationship and a conference format made congruent with the establishment and maintenance of this helping relationship. Unpublished Doctoral Dissertation. University of Pittsburgh, 1973.

Skrak, N.D., The application of immediate secondary reinforcement to classroom teaching observation in clinical supervision. Unpublished Doctoral Dissertation, University of Pittsburgh, 1973.

Smyth, W.J., & King, L., Some promising variables in the study of teacher effectiveness. Research monograph. Centre for Research on Teaching, University of Alberta, 1978.

Smyth, W.J., Pupil engaged learning time: concepts, findings and implications. The Australian Journal of Education, October 1980 (in press).

Smyth, W.J., Research on teaching: what's in it for me? The Australian Administrator, Vol. 2, No. 1, 1981a, 1-4.

Smyth, W.J., Research on classroom management: studies of pupil engaged learning time as a special but instructive case. British Journal of Teacher Education, Vol. 7, No. 2, 1981b, 33-55.

Smyth, W.J., Clinical supervision: some Australian case study data on school-based professional development. Unpublished manuscript, Deakin University, 1981c.

Stenhouse, L., Using research means doing research. Unpublished paper. University of East Anglia, 1978.

Sullivan, C.G., Clinical supervision: a state of the art review. Association for Supervision and Curriculum Development, Alexandria, Virginia, 1980.

Thorlacius, J., The supervisor-teacher analogous categories system (STACS): a system for analysing supervisor-teacher supervisory conferences . Challenges in Educational Administration. Vol. 17, No.(1-4), 1978, 77-90.

University of Alberta, Faculty of Education. Guidelines for the supervision of student teachers. 1977-78.

Wagstaff, L., & McCollough, T., In-service education: education's disaster area. Administrator's Notebook. Vol. 21, No. 8, 1973, 1-4.

Wiles, J., & Bondi, J., Supervision: A Guide to Practice, Charles E. Merrill, Columbus, Ohio, 1980.

Williams, R.C., A political perspective on staff development. In A. Lieberman and L. Miller (eds.) Staff Development: New Demands, New Realities, New Perspectives. Teachers College Press, New York, 1979, 95-106.

Wood, F., & Thompson, S., Guidelines for better staff development. Educational Leadership, Vol. 37, No. 5, 1980, 374-8.

Yargers, S., Howey, K.R., & Joyce, B., In-service teacher education. Report of a survey of teachers, professors and community representatives in California, Georgia, Michigan, and the urban school development program. Booksend Laboratory, Palo Alto, California, n.d.